REMARKS

Claims 1-21 all the claims pending in the application. Claims 1-21 stand rejected on prior art grounds. In addition, the specification is objected to. Applicants respectfully traverse these objections/rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-21 stand rejected under 35 U.S.C. §102(e) as being unpatentable over Salonidis, et al. (U.S. Publication No. 2003/0096576), hereinafter referred to as Salonidis. Applicants respectfully traverse these rejections based on the following discussion.

A. The Rejection Based on Salonidis

Applicants respectfully submit that the Office Action confuses the "random time period" mentioned in the Prior Art references with the claimed "random time period." With conventional Bluetooth type devices, the time period between communication attempts is made random to avoid having synchronized devices from continually missing each others communication windows.

To the contrary, the claimed "random time period" relates to how long a device waits to process an inquiry message after such an inquiry has been received. By making this time period random, the invention decreases inquiry delay and increases the rate of useful responses.

Regarding claims 1-21, Salonidis fails to disclose, teach or suggest the features of independent claim 1, including returning to continue the activity for a random time period on receipt of an inquiry message from another device and, upon expiry of the random time period, processing the inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network. Similarly, Salonidis also fails to disclose, teach or suggest the features of independent claim 8, and similarly, independent claim 15, including

computer program code returning to continue the activity for a random time period on receipt of an inquiry message from another device and, upon expiry of the random time period, processing the inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network. (See Page 3, lines 22-25; Page 4, lines 5-8 and lines 17-20; Page 10, line 20-Page 11, line 5; Page 18, lines 1-7; and Figures 3a-3e-3).

Instead, Figures 1-3 of Salonidis merely teach a method, and related apparatus, for connecting two or more devices in an ad hoc wireless communication network. This method includes returning to a device discovery activity on receipt of an inquiry message and upon end of a predetermined time period (what the Examiner attempts to analogize to a "random" time period. Contrary to the assertion in the Office Action, "the second state 202 is an INQUIRY SCAN state, since the first state 201 was arbitrarily chosen to be an INQUIRY state. The unit then remains in state 202 for a second period of time, R2, essentially in a "sleep" mode 212. As for the first time period R1, a predefined probability distribution is preferably chosen to control the length of time R2, ..." Accordingly, this method returns to continue the activity for a predetermined time period on receipt of an inquiry message not for a random time period before processing an inquiry message as taught by Applicant. (See Office Action, Page 3, Paragraph 1; Salonidis at Abstract; Page 4, Paragraph [0046] and Figures 2 and 3).

Indeed, although the "connection establishment process will generally take a random finite amount of time, T 340 that includes frequency synchronization delays and the inquired unit's standby or backoff delay 140, if the amount of time T 340 to complete the connection process is less than the duration of the 'on' interval (e.g., 316) then, after executing the connection procedure of Figure 1, the two units 360, 370 preferably enter the CONNECTION state 205 of Figure 2." (See Salonidis, Page 4 at Paragraph [0052]). Thus, Salonidis clearly does not disclose or teach returning to continue the activity for a random time period on receipt of an inquiry message from another device and, upon expiry of the random time period, processing the inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad-hoc network.

In contrast, Applicant's invention returns to a normal activity for a random time before processing an inquiry message. In particular, Applicant discloses returning to continue the activity for a random time period on receipt of an inquiry message from another device and, upon expiry of the random time period, processing the inquiry message in accordance with normal procedures. "It is later shown, ..., that a device doing randomized inquiry scan within a period of 1.28 sec is ensured to receive an inquiry message from a single inquirer in 5.12 sec." This invention eliminates the problems with the "original BT algorithm, [where] an inquiry device is unavailable for discovery for long periods of time. Thus, by performing inquiry scan for a small fraction of time the device is given a change to be discovered." (See Page 10, lines 20-27).

Since the Salonidis method is focused on connecting two or more devices where in a first state, the device seeks to establish a connection with another device, and in a second state, the device renders itself available for connection with another device and "alternating a present state of each device between the first state and the second state in accordance with a predefined probability distribution until either a predetermined timeout period has expired or a connection between the devices has been established," this conventional method may likely provide an inquiring device, which is unavailable for discovery for a long period of time.

Therefore, Applicant's invention is configured so that "the proposed algorithm increases the rate of useful responses for the same scenario by up to 60%. For a given number of Max-responses, the inquiry delays and the number of timeouts are seen to be reduced by 50%. Thus the proposed algorithm improves the device discovery delays without adding any complexity. The inputs to the frequency hopping kernel, for all types of hopping sequences remain unchanged. The algorithm thus will reduce the pre-connection overheads for Bluetooth based systems and make more bandwidth available for useful communication." (See Page 18, lines 1-7).

Based on the above, the Applicant traverses the assertion that Salonidis teaches Applicant's invention of independent claims 1, 8 and 15, and related dependent claims 2-7, 9-14 and 16-21.

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III. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-21, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

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